

Work Order ID 81712

81712

Page 1

March-19-12 8:41:34 AM

Item ID: D4353-041

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bearpaw Assembly

Start Date: 29/03/2012 Start Qty: 4.00

4

Cust Item ID:

Required Date: 29/03/2012 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/03/19 Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D4353	B
-------	---

120

0.00

120

FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

Cut Blank as per D4353-1 File

UHMW 1" B/K

130

0.00

130

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1.

1-Inspect material for defects or damage prior to machining

2-Machine as per FolioFB050 and Dwg

FOLIO REV: AA

DWG REV: B

3-Deburr

5
JM/B
12-4-9

12/07/09

PTD

W/O: 81712		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D 4353-041 PAR #: _____ Fault Category: Machinist NCR: Yes No DQA: Not Date: 12/07/19
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: OK Date: 12/7/20

NCR: 12-1507		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12/07/09	130	1 part scrap, 1 hole are oversized R.C. operator error. Did not read instruction class engine. Forgot Bolt For Molden Port.	S 021042 12/07/09	SCRAP + Death no Penhe	and 12/07/09	S 12/07/09	S 021042 12/07/09	S 12/07/09

NOTE: Date & initial all entries

Work Order ID 81712

March-19-12 8:41:34 AM

81712

Page 2

Item ID: D4353-041

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N900040100

Setup Start

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Stop

NS2

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Required Date: 29/03/2012 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

QC2- Inspect parts off machine FAI/FAIB

0.00

140

QC

Memo

0.00

Quality Control

150

QC8- Inspect parts - second check

0.00

150

QC

Memo

0.00

Quality Control

152

Pick Kit

0.00

152

Packaging

Memo

0.00

Packaging

on 12/07/09

12 7-10

4

4

4x

EP 12/07/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 81712***81712***

Page 3

March-19-12 8:41:34 AM

Item ID: D4353-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Bearpaw Assembly

Stop ***NS2***

Start Date: 29/03/2012 Start Qty: 4.00

4

Cust Item ID:

Required Date: 29/03/2012 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

153

0.00

153

Small Fab

Memo

0.00

Small Fab

PRESS D4353-3 INSERT INTO BEARPAW

154

QC5- Inspect part completeness to step on W/O

0.00

154

QC

Memo

0.00

Quality Control

155

Identify as per dwg & Stock Location: _____

0.00

155

Packaging

Memo

0.00

Packaging

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Page 4

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Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

12/7/17 *[Signature]*
MF
12-07-17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

March-19-12 8:41:37 AM

Page 1

Work Order ID: 81712

81712

Parent Item: D4353-041

D4353-041

Parent Item Name: Bearpaw Assembly

Start Date: 29/03/2012

Required Date: 29/03/2012

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A NEW ISSUE 11-04-12 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased	No				sf	642.5059		20			

MUHMWB10

UHMW 1" Black

**

Location	Loc Qty	Loc Code
MAT018	385.3815789	
120035	67.7815789	
120401	197.6	
120972	120	
MAT019	257.1243158	
117321	74.6	
117738	93.28	
117819	83.3	
118814	1.5	
119145	4.44431579	

D4353-3

Manufactured No

m121277

Each 2.0000

D4353-3

Bearpaw Insert

**

Location	Loc Qty	Loc Code
GA	2	
71095	2	

m121277
4

12/07/10

B80241 (4)

5
Jm
12-4-9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 81712
Description: Bearpaw		Part Number: D4353-1
Inspection Dwg: D4353	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.38	+/-0.030	0.375	—		Vern M1-06	
7.375	+/-0.010	7.375	—		"	
12.50	+/-0.030	12.500	—		"	
1.38	+/-0.030	1.370	—		"	
3.813	+/-0.010	3.813	—		"	
24.00	+/-0.030	24.000	—		M-type M2-04	
10.09	+/-0.030	10.090	—		"	
1.00	+/-0.030	1.000	—		Vern M1-06	
6.150	+/-0.010	6.150	—		"	
3.038	+/-0.010	3.038	—		"	
6.563	+/-0.010	6.563	—		M-type M2-04	
9.250	+/-0.010	9.250	—		"	
27.00	+/-0.030	27.000	—		"	
1.25	+/-0.030	1.265	—		Vern M1-06	
0.30 x 45°	+/-0.030	0.280 x 45°	—		"	
1.38	+/-0.030	1.375	—		"	
0.63	+/-0.030	0.636	—		"	
0.95	+/-0.030	0.960	—		"	
R0.25	+/-0.030	R.250	—		R-6	
0.70	+/-0.030	0.700	—		Vern M1-06	
0.07 x 45°	+/-0.030	0.063 x 45°	—		"	
Ø0.650	+/-0.010	Ø0.650	—		"	
Ø0.261	+0.006/-0.001	Ø0.261	—		"	
0.400	+/-0.010	0.400	—		"	
4.750	+0.012/-0.000	4.750	—		"	
4.000	+0.012/-0.000	4.000	—		"	
5.75	+/-0.030	5.760	—		"	
0.63	+/-0.030	0.630	—		"	
0.57	+/-0.030	0.570	—		"	
0.25	+/-0.030	0.255	—		"	
0.45	+/-0.030	0.450	—		"	
0.06 x 45°	+/-0.030	0.040 x 45°	—		"	
R0.25	+/-0.030	R.250	—		"	

Measured by: JLF	Audited by: JY	Preliminary Approval:
Date: 12/07/09	Date: 12-7-10	Date:

Rev	Date	Change	Revised by	Approved
A	11-07-08	New Issue		

+0.0012
-0.0000
+0.0012
-0.0000

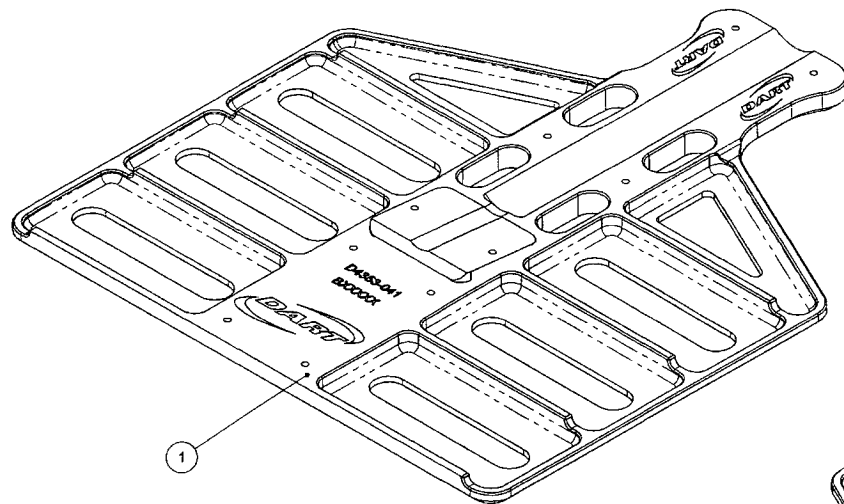
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

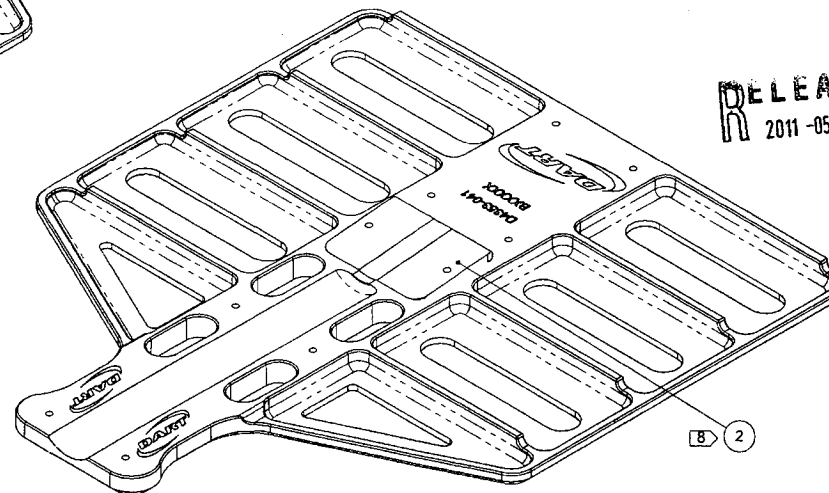
NOTE: Date & initial all entries



D4353-041 429 BEARPAW ASSEMBLY

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 81712 MLC

12/03/19



RELEASED
2011-05-24
WPD

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 7.45 lbs
- 8) PRESS FIT



ITEM	QTY	P/N	DESCRIPTION
	X	D4353-041	429 BEARPAW ASSEMBLY
1	1	D4353-1	429 BEARPAW
2	1	D4353-3	429 BEARPAW INSERT

B	SHT 1 WEIGHT CORRECTED WAS 8.24 lbs. SHTS 1-3 DART LOGOS UPDATED. SHT 2 ZONE B8, AFT POCKET REDUCED. RIB INCREASED IN HEIGHT. SHT 3 SECTS. B,C & D RIB INCREASED IN HEIGHT.	AJS	11.04.26
A	NEW ISSUE	AJS	11.03.24
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED	W	DRAWING NO.	REV. B
MFG. APPR.	W	D4353	SHEET 1 OF 4
APPROVED	W	TITLE	SCALE
DE APPR.	W	429 BEARPAW ASSEMBLY	NTS
DATE	11.04.26	<small>COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

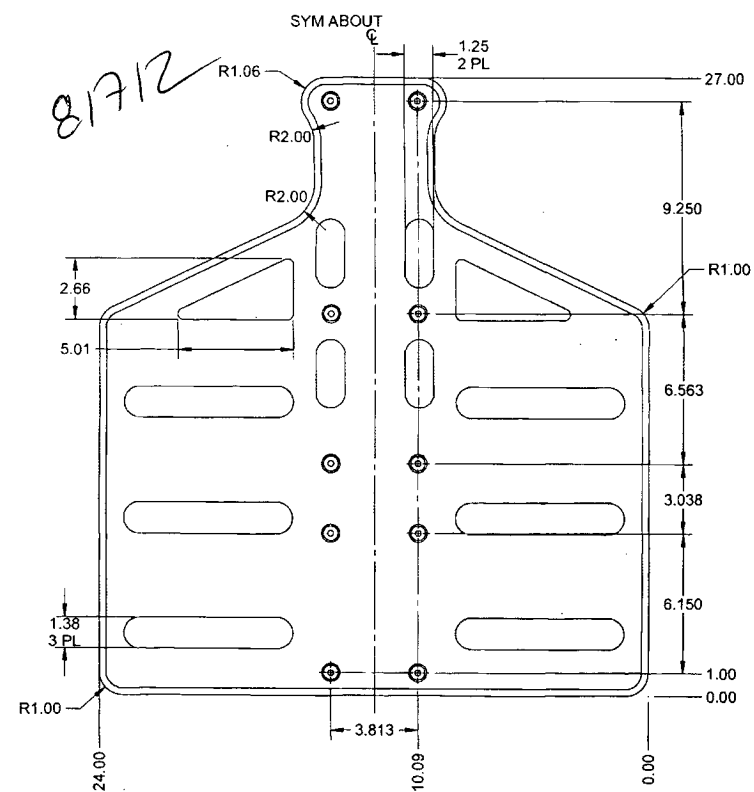
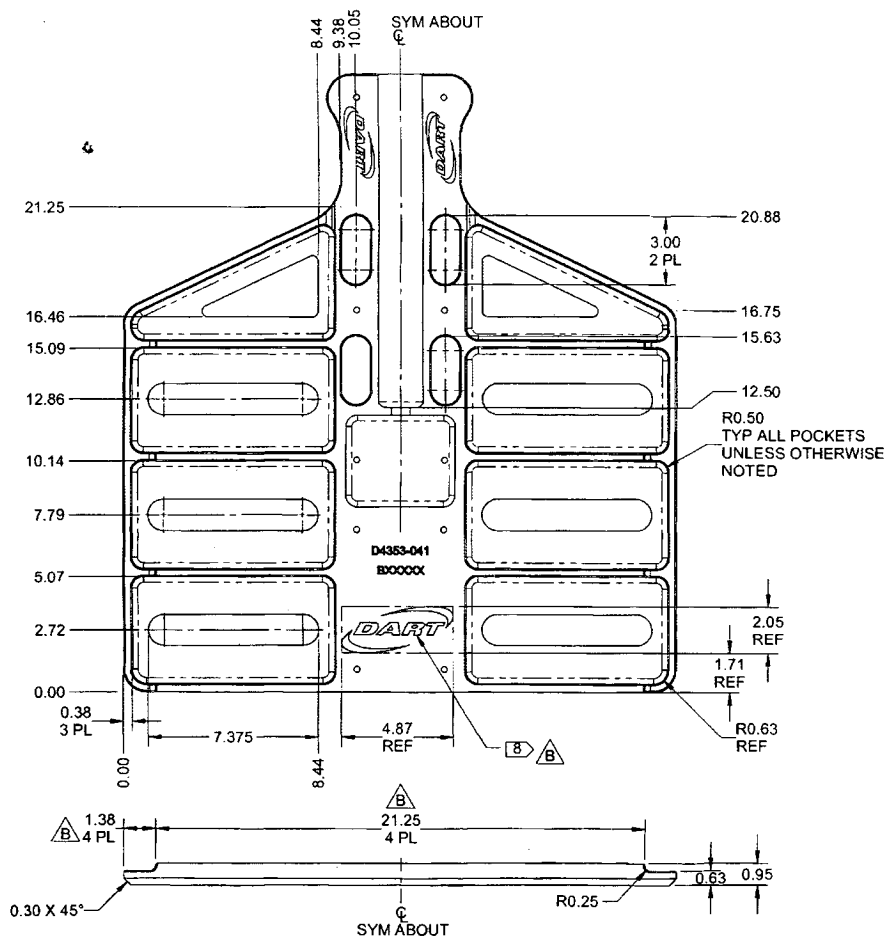
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4353-1 429 BEARPAW

RELEASED
2011-05-04
M

NOTES:

- 1) MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689, 1.000 THICK.
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: ENGRAVE WITH DART ASSEMBLY P/N "D4353-041" AND B/N "BXXXXX"
0.005 - 0.010 DP AS SHOWN
- 7) WEIGHT: 7.07 lbs
- 8) ENGRAVE "DART" LOGO AS SHOWN 0.003 - 0.005 DP.

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>140</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>21</i>	D4353	SHEET 2 OF 4
APPROVED	<i>140</i>	TITLE	SCALE
DE APPR.	<i>14</i>	429 BEARPAW ASSEMBLY	NTS
DATE	11.04.26	COPYRIGHT © 2011 BY DART AEROSPACE LTD	
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

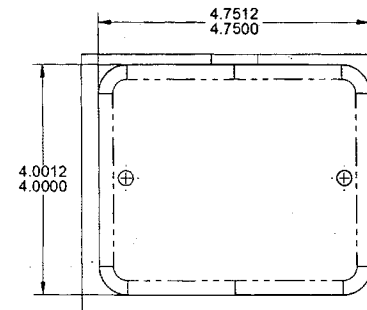
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

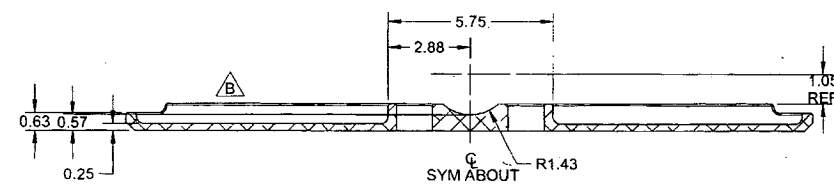
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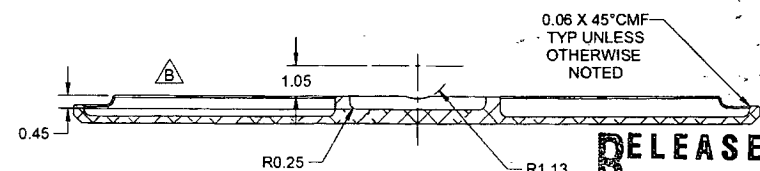
81712



DETAIL A A5-3
(SCALE 2X)



SECTION B-B C8-3

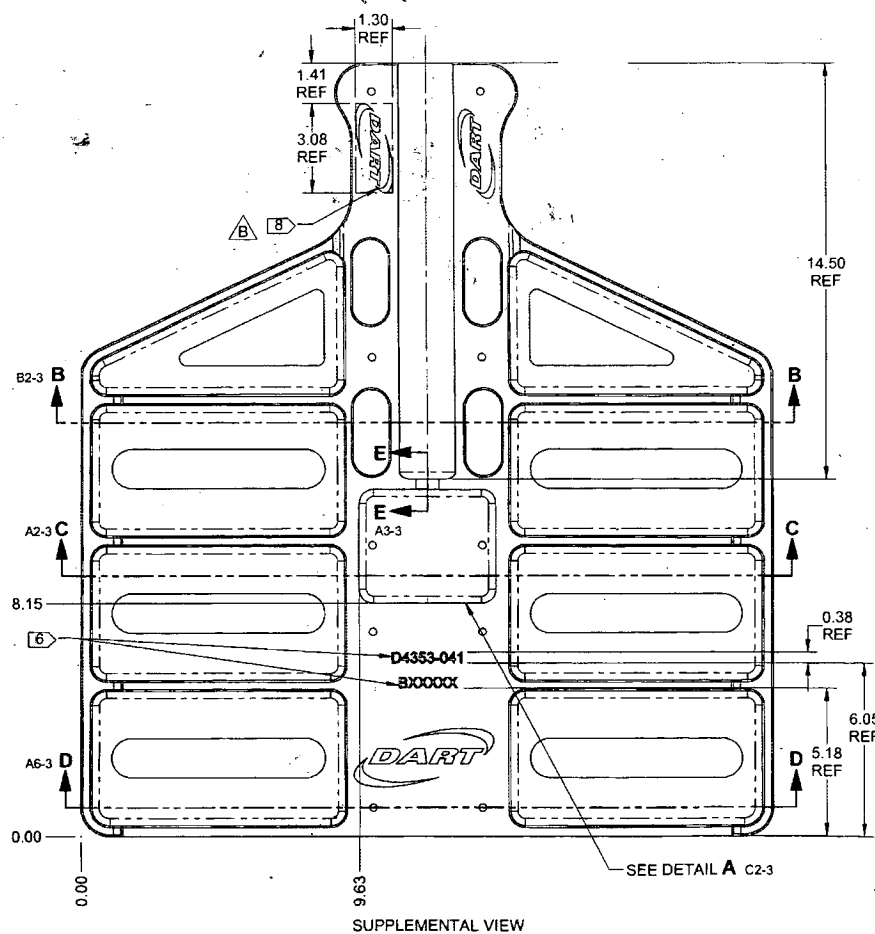


SECTION C-C C8-3

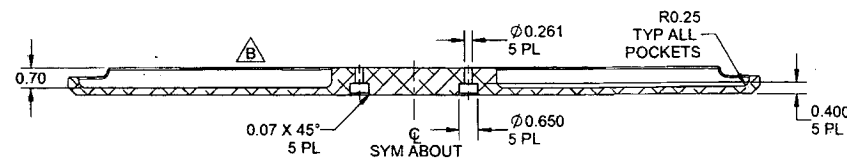
RELEASED
2011-05-24



SECTION E-E C6-3
(SCALE 2X)



SUPPLEMENTAL VIEW



SECTION D-D B8-3

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>AP</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>AP</i>	D4353	SHEET 3 OF 4
APPROVED	<i>AP</i>	TITLE	SCALE
DE APPR.	<i>AP</i>	429 BEARPAW ASSEMBLY	NTS
DATE	11.04.26	COPYRIGHT © 2011 BY DART AEROSPACE LTD	
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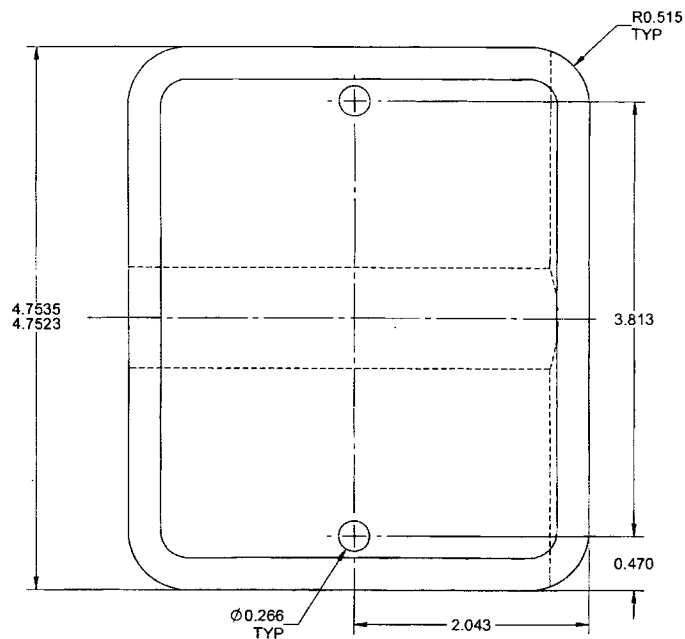
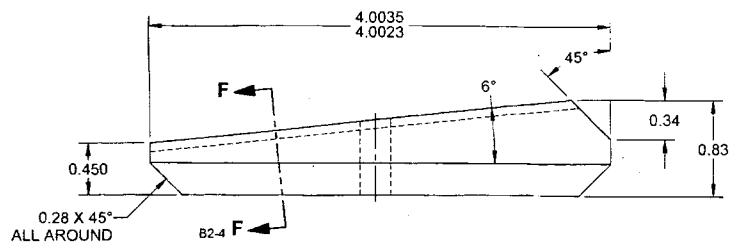
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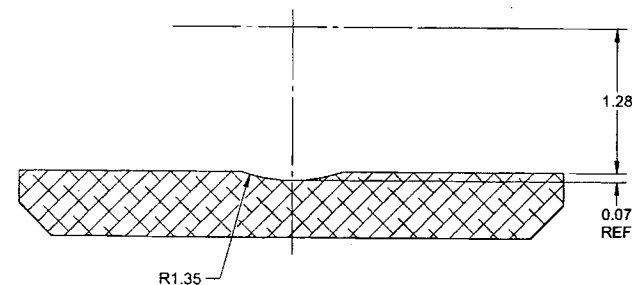
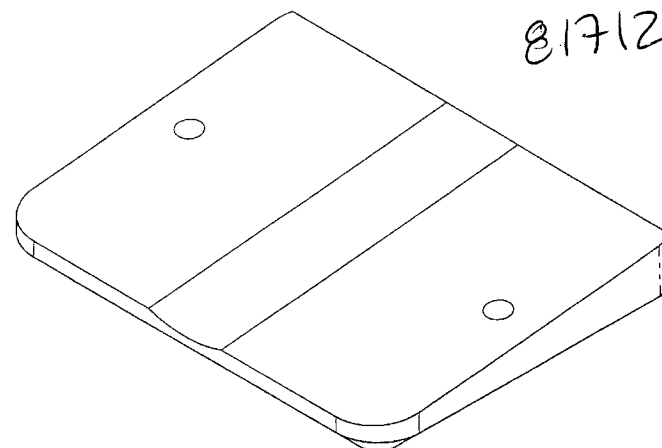
NOTE: Date & initial all entries



D4353-3 429 BEARPAW INSERT

NOTES:

- 1) MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689, 1.000 THICK.
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.38 lbs



SECTION F-F C7-4

RELEASED
2011-05-24

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4353	SHEET 4 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	429 BEARPAW ASSEMBLY	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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